

CONTENTS

MANUFACTURE FO RAW SUGAR

1. ECONOMIC PHASES OF THE SUGAR INDUSTRY	1
2. RAW MATERIAL	10
3. EXTRACTION OF THE JUICE	29
4. STEAM PLANT AND FUEL	60
5. OUTLINE OF METHOD OF MANUFACTURING RAW CANE SUGAR	69
6. PURIFICATION OF THE JUICE	75
7. TREATMENT OF SCUMS AND CLARIFIED JUICE	120
8. CHEMICAL REAGENTS USED IN SUGAR PROCESSES	130
9. EVAPORATION AND HEATING	134
10. PRESERVATION OF THE JUICE AND SIRUP DURNG SHUTDOWNS	175
11. CRYSTALLIZATION OF THE SUGAR	178
12. CRYSTALLIZATION IN MOTION	216
13. PURGING, PACKING, AND WAREHOUSING THE SUGAR	231
14. BLACKSTRAP MOLASSES AND EDIBLE SIRUPS	245
15. KEEPING AND REFINING QUALITIES OF RAW SUGAR	266
16. SUGAR REFINING	287

SUGAR ANALYSIS AND CHEMICAL CONTROL OF THE FACTORY

17. SUGARS AND OTHER CONSTITUENTS OF THE CANE	353
18. OPTICAL METHODS IN SUGAR ANALYSIS	359
19. DOUBLE POLARIZATION METHODS-CLERGET SUCROSE	399
20. CHEMICAL METHODS IN SUGAR ANALYSIS	408
21. DENSITY AND TOTAL SOLIDS DETERMINATIONS	431
22. DETERMINATION OF ASH	448
23. HYDROGEN-ION (pH) CONTROL	456
24. COLOR AND TURBIDITY IN SUGAR PRODUCTS	470
25. SAMPLING AND AVERAGING	492
26. ANALYSIS OF THE SUGAR CANE	508
27. ANALYSIS OF THE JUICE	512
28. ANALYSIS OF THE SIRUP, MASSECUITES, AND MOLASSES	524
29. ANALYSIS OF SUGARS	540
30. EXAMINATION OF REFINED SUGAR	549
31. ANALYSIS OF THE FILTER PRESS CAKE	560
32. ANALYSIS OF THE BAGASSE	562
33. CHECKING FACTORY WASTES AND BOILER FEED WATER FOR SUGAR	575

34. DEFINITIONS AND EXPRESSIONS USED IN SUGAR HOUSE WORK	579
35. CHEMICAL CONTROL	588
36. SUGAR HOUSE CALCULATIONS	632
37. METHODS OF CANE PURCHASE	644
38. FERMENTATION AND MICROORGANISMS IN SUGAR MANUFACTURE AND REFINING	653
39. ANALYSIS OF LIMESTONE, LIME, SULFUR, AD SULFUROUS ACID	663
40. ANALYSIS OF FLUE GASES	670
41. SPECIAL REAGENTS	674
REFERENCE TABLES (See list, page xii)	681
INDEX	817